

## LIST OF CONTENTS

### NUMBER 1

KEITH KWOK-WAH YUEN, ENDARRA LAI-KING TANG and LISA LAI-YING SO	Instructions to Contributors	iii
J. H. KINNEY, M. BALOOCH, S. J. MARSHALL, G. W. MARSHALL JR and T. P. WEIHS	Relations between the mesiodistal crown diameters of the primary and permanent teeth of Hong Kong Chinese	1
DAVID K. WHITTAKER and MARINA M. BAKRI	Hardness and Young's modulus of human peritubular and intertubular dentine	9
LUIGI ALOE, ROLANDO MORONI and FRANCESCO ANGELUCCI	Racial variations in the extent of tooth root translucency in ageing individuals	15
C. H. SISSONS, L. WONG and T. W. CUTRESS	Evidence of a role for nerve growth factor in the effect of sialoadenectomy on body temperature of parasite-infected mice	21
A. CARLÉN, J. OLSSON and A.-C. BÖREJSSON	Inhibition by ethanol of the growth of biofilm and dispersed microcosm dental plaques	27
YOSHITAKA YOSHIMURA, YOH HISADA, KUNIaki SUZUKI, YOSHIaki DEYAMA and AKIRA MATSUMOTO	Saliva-mediated binding <i>in vitro</i> and prevalence <i>in vivo</i> of <i>Streptococcus mutans</i>	35
S. SHIBATA, S. SUZUKI, T. TENGAN, M. ISHII and T. KURODA	Effect of a low-calcium environment on alkaline phosphatase activity in embryonic rat calvarial bone cells in culture	41
D. K. WHITTAKER and T. MOLLESON	A histological study of the developing condylar cartilage of the fetal mouse mandible using coronal sections	47
CHRISTOPHER J. TRENTINI and WILLIAM R. PROFFIT	Caries prevalence in the dentition of a late eighteenth century population	55
K. C. JULIEN, P. H. BUSCHANG, G. S. THROCKMORTON and P. C. DECHOW	High-resolution observations of human premolar eruption	63
M. J. LUBBOCK, V. T. HARRISON, A. G. S. LUMSDEN and R. M. PALMER	Normal masticatory performance in young adults and children	69
GUO H. ZHANG, BENJAMIN CHANG and JAMES E. MELVIN	Development and cell fate in interspecific ( <i>Mus musculus/Mus caroli</i> ) intraocular transplants of mouse molar tooth-germ tissues detected by <i>in situ</i> hybridization	77
M. LAINE and R. LEIMOLA-VIRTANEN	Mediation of the depolarization-induced $[Ca^{2+}]_i$ increase in rat sublingual acini by acetylcholine released from nerve terminals	85
N. VONGSAVAN and B. MATTHEWS	Effect of hormone replacement therapy on salivary flow rate, buffer effect and pH in perimenopausal and postmenopausal women	91
B. LARSSON, G. OLIVECRONA and T. ERICSON	Experiments in pigs on the sources of laser Doppler blood-flow signals recorded from teeth	97
<b>Short Communications</b>	Lipids in human saliva	105
KAZUSHI KUNIMATSU, YUKIO OZAKI, YOSUKE AOKI and IHACHI KATO	Possible roles of medullasin in nifedipine-induced human gingival overgrowth	111
P. B. SUGERMAN, N. W. SAVAGE, S. L. WILLIAMS, O. B. JOYNSON, T. J. DALEY and J. G. COWPE	A quantitative cytological study of lesional and non-lesional mucosa in oral lichen planus	117
U. RIPAMONTI, M. HELIOTIS, D. C. RUEGER and T. K. SAMPATH	Induction of cementogenesis by recombinant human osteogenic protein-1 (hOP-1/BMP-7) in the baboon ( <i>Papio ursinus</i> )	121

## NUMBER 2

M. BAKKE, C. E. THOMSEN, A. VILMANN, K. SONEDA, M. FARELLA and E. MØLLER	Ultrasonographic assessment of the swelling of the human masseter muscle after static and dynamic activity	133
H. GOUGH, G. A. LUKE, J. A. BEELEY and D. A. M. GEDDES	Human salivary glucose analysis by high-performance ion-exchange chromatography and pulsed amperometric detection	141
K. KOMATSU and A. VIIDIK	Changes in the fibre arrangement of the rat incisor periodontal ligament in relation to various loading levels <i>in vitro</i>	147
JULIAN R. D. MOISEIWITSCH and JEAN M. LAUDER	Stimulation of murine tooth development in organotypic culture by the neurotransmitter serotonin	161
S. ALALUUUSUA, J. MÄTTÖ, L. GRÖNROOS, S. INNILÄ, H. TORKKO, S. ASIKAINEN, H. JOUSIMIES-SOMER and M. SAARELA	Oral colonization by more than one clonal type of mutans streptococcus in children with nursing-bottle dental caries	167
KAREN HIJEMAE, M. R. HEATH, GILLIAN HEATH, E. KAZAZOGLU, J. MURRAY, D. SAPPER and K. HAMBLETT	Natural bites, food consistency and feeding behaviour in man	175
A. J. DUNIPACE, C. A. WILSON, M. E. WILSON, W. ZHANG, A. H. KAFLAWY, E. J. BRIZENDINE, L. L. MILLER, B. P. KATZ, J. M. WARRICK and G. K. STOOKEY	Absence of detrimental effects of fluoride exposure in diabetic rats	191
Z. A. YUAN, P. M. COLLIER, J. ROSENBLUM and C. W. GIBSON	Analysis of amelogenin mRNA during bovine tooth development	205
TOMOMI BABA, TATSUO TERASHIMA, SHINICHIRO OIDA and SATOSHI SASAKI	Determination of enamel protein synthesized by recombined mouse molar tooth germs in organ culture	215
<b>Short Communications</b>		
A. ZAMAN, T. KOHGO, M. SHINDOH, T. IIZUKA and A. AMEMIYA	Induction of adenocarcinomas in the submandibular salivary glands of female Wistar rats treated with 7,12-dimethylbenz(a)anthracene	221
JUNKO YAHIRO and SAKUICHIRO MIYOSHI	Immunohistochemical localization of kallikrein in salivary glands of the Japanese monkey, <i>Macaca fuscata</i>	225
P. M. AMBADKAR and A. P. RAVAL	Influence of oestrous cyclicity on certain metabolic alterations in the submandibular glands of female rats	229

## NUMBER 3

M. C. DEAN and A. E. SCANDRETT	The relation between long-period incremental markings in dentine and daily cross-striations in enamel in human teeth	233
K. HORIE, H. KAGAMI, Y. HIRAMATSU, K. HATA, T. SHIGETOMI and M. UEDA	Selected salivary-gland cell culture and the effects of isoproterenol, vasoactive intestinal polypeptide and substance P	243
TAKEHIKO KUBOTA, TAKASHI NOMURA, TOKUYA TAKAHASHI and KOHJI HARA	Expression of mRNA for matrix metalloproteinases and tissue inhibitors of metalloproteinases in periodontitis-affected human gingival tissue	253
LEIGH W. KENT, RENÉE A. DYKEN, FIROZ RAHEMTULLA, ANTHONY C. ALLISON and SUZANNE M. MICHALEK	Effect of <i>in vitro</i> passage of healthy human gingival fibroblasts on cellular morphology and cytokine expression	263
D. BEIGHTON, A. ADAMSON and A. RUGG-GUNN	Associations between dietary intake, dental caries experience and salivary bacterial levels in 12-year-old English schoolchildren	271
P. ANDERSON, J. C. ELLIOTT, U. BOSE and S. J. JONES	A comparison of the mineral content of enamel and dentine in human premolars and enamel pearls measured by X-ray microtomography	281

A. M. VACCA-SMITH, A. R. VENKITARAMAN, R. G. QUIVEY JR and W. H. BOWEN	Interactions of streptococcal glucosyltransferases with $\alpha$ -amylase and starch on the surface of saliva-coated hydroxyapatite	291
D. TENORIO and F. J. HUGHES	An immunohistochemical investigation of the expression of parathyroid hormone receptors in rat cementoblasts	299
<b>Short Communications</b>		
C. M. SEDGLEY, C. S. CHU, E. C. M. LO and L. P. SAMARANAYAKE	The oral prevalence of aerobic and facultatively anaerobic Gram-negative rods and yeasts in semi-recluse human vegetarians	307
MARIANNE IN CHINGBINGYONG and CHRISTOPHER V. HUGHES	Detection of <i>Mycoplasma fermentans</i> in human saliva with a polymerase chain reaction-based assay	311

#### NUMBER 4

J. J. W. BRECKON, R. M. HEMBRY, J. J. REYNOLDS and M. C. MEIKLE	Identification of matrix metalloproteinases and their inhibitor in the articular disc of the craniomandibular joint of the rabbit	315
M. C. RAADSHEER, S. KILARIKIS, T. M. G. J. VAN EIJDEN, F. C. VAN GINKEL and B. PRAHL-ANDERSEN	Masseter muscle thickness in growing individuals and its relation to facial morphology	323
A. HARTMANN, J. AZÉRAD and Y. BOUCHER	Environmental effects on laser Doppler pulpal blood-flow measurements in man	333
M. CHIBA, S. YAMAGUCHI and K. KOMATSU	Measurement of the force needed to restrain eruptive movement of the rat mandibular incisor	341
N. YOSHIBA, K. YOSHIBA, M. IWAKU and H. OZAWA	Immunolocalization of the small proteoglycan decorin in human teeth	351
XIAO-BING QIAN and J. P. NAFTEL	Effects of neonatal exposure to anti-nerve growth factor on the number and size distribution of trigeminal neurones projecting to the molar dental pulp in rats	359
R. M. CARVALHO, M. YOSHIYAMA, E. L. PASHLEY and D. H. PASHLEY	<i>In vitro</i> study on the dimensional changes of human dentine after demineralization	369
R. M. CARVALHO, M. YOSHIYAMA, P. D. BREWER and D. H. PASHLEY	Dimensional changes of demineralized human dentine during preparation for scanning electron microscopy	379
<b>Short Communication</b>		
Y. KITAGAWA, Y. MANABE, J. OYAMADA and A. ROKUTANDA	Morphological and anthropological aspects of human triangular deciduous lower first molar teeth	387

#### NUMBER 5

M. I. GAZI, S. W. COX, D. T. CLARK and B. M. ELEY	A comparison of cysteine and serine proteinases in human gingival crevicular fluid with tissue, saliva and bacterial enzymes by analytical isoelectric focusing	393
I. A. MJÖR and I. NORDAHL	The density and branching of dentinal tubules in human teeth	401
MASAYUKI AZUMA, TETSUYA TAMATANI, KAZUHIRO FUKUI, TOKUYUKI YUKI, KATSUMI MOTEGI and MITSUNOBU SATO	Different signalling pathways involved in transforming growth factor $\beta_1$ -induced morphological change and type IV collagen synthesis in simian virus-40-immortalized normal human salivary gland duct and myoepithelial cell clones	413
JEANCLARE SEAGRAVE, RAFAEL HILDEBRAND and LIZABETH J. JOHNSON	Muscarinic signalling in submandibular salivary acinar cells of ageing rats	425
N. L. O'DELL, S. K. BURLISON, B. C. STARCHER and C. B. PENNINGTON	Morphological and biochemical studies of the elastic fibres in the craniomandibular joint articular disc of the tight-skin mouse	431

H.-O. ITO, T. SHUTO, H. TAKADA, T. KOGA, Y. AIDA, M. HIRATA and T. KOGA	Lipopolysaccharides from <i>Porphyromonas gingivalis</i> , <i>Prevotella intermedia</i> and <i>Actinobacillus actinomycetemcomitans</i> promote osteoclastic differentiation <i>in vitro</i>	439
P. A. ROBINSON, J. P. LEEK, I. M. CARR, A. BAILEY, N. J. LENCH, J. MORRISON, W. J. HUME, A. S. HIGH and A. F. MARKHAM	Yeast artificial chromosome cloning and chromosomal localization of the abundant odontogenic keratocyst protein elafin	445
T. OKIJI, T. KOSAKA, A. M. M. KAMAL, N. KAWASHIMA and H. SUDA	Age-related changes in the immunoreactivity of the monocyte/macrophage system in rat molar pulp	453
M. TEWARI, O. C. TUNCAY, A. MILCHMAN, P. J. REDDY, C. D. REDDY, D. E. CRESSMAN, R. TAUB, ROBERT C. NEWTON and D. S. TEWARI	Association of interleukin-1-induced, NF $\kappa$ B DNA-binding activity with collagenase gene expression in human gingival fibroblasts	461
Y. SCHALK-VAN DER WEIDE and F. BOSMAN	Tooth size in relatives of individuals with oligodontia	469
R. P. SHELLIS	A scanning electron-microscopic study of solubility variations in human enamel and dentine	473
FAN LIN, LIHONG ZHAO and GARY E. WISE	<i>In vivo</i> and <i>in vitro</i> effects of epidermal growth factor on its receptor gene expression in rat dental follicle cells	485
T. ORFANOS, L. SARINNAPHAKORN, G. M. MURRAY and I. J. KLINEBERG	Placement and verification of recording electrodes in the superior head of the human lateral pterygoid muscle	493
<b>Short Communications</b>		
H. TANAKA, S. EBARA, K. OTSUKA and K. HAYASHI	Adsorption of saliva-coated and plain streptococcal cells to the surfaces of hydroxyapatite beads	505
TOSHIYUKI SHIBATA, KAZUFUMI WATANABE, HIRONORI ODA, MAKOTO ARISUE, TAKAO KUROSAWA, MASAHICO TOHMA, MASUO HOSOKAWA and NORITOSHI TAKEICHI	Experimental bilirubin pigmentation of rat dentine and its detection by a qualitative analytical method	509
JUNKO NAKAJIMA, MAKIO MOGI and TAKEHIRO CHINO	Inhibition by streptococcal immunopotentiator OK432 of lymph-node metastasis in hamster cheek-pouch carcinoma with enhancement of tumour necrosis factor- $\alpha$ and interleukin-6 in serum	513

## NUMBER 6

MOZAFAR ABDI and DAVID B. DRUCKER	Phospholipid profiles in the oral yeast <i>Candida</i>	517
S. MEGHJI, W. QURESHI, B. HENDERSON and M. HARRIS	The role of endotoxin and cytokines in the pathogenesis of odontogenic cysts	523
J. LI, P. M. FARTHING and M. H. THORNHILL	Cytokine regulation of major histocompatibility complex antigen expression by human oral and skin keratinocytes	533
N. MEREDITH, M. SHERRIFF, D. J. SETCHELL and S. A. V. SWANSON	Measurement of the microhardness and Young's modulus of human enamel and dentine using an indentation technique	539
TAISHIN TAKUMA, TOSHIHIKO YAJIMA and TOKURO ICHIDA	Induction of amylase release from rat parotid acinar cells by cooling <i>in vitro</i>	547
F. LOBBEZOO, H. W. VAN DER GLAS, A. VAN DER BILT, R. BUCHNER and F. BOSMAN	Sensitivity of the jaw-jerk reflex in patients with myogenous temporomandibular disorder	553
J. M. NORMAN and P. M. GIFFARD	Biochemical studies on LevJ, a fructanase from <i>Actinomyces naeslundii</i> T14V	565
HELENA H. RITCHIE, YOICHIRO SHIGEYAMA, MARTHA J. SOMERMAN and WILLIAM T. BUTLER	Partial cDNA sequencing of mouse dentine sialoprotein and detection of its specific expression by odontoblasts	571

JAN E. KRONMILLER and TUNG NGUYEN	Spatial and temporal distribution of <i>Indian hedgehog</i> mRNA in the embryonic mouse mandible	577
ROBERT E. DELCANHO, YOUN JOONG KIM and GLENN T. CLARK	Haemodynamic changes induced by submaximal isometric contraction in painful and non-painful human masseter using near-infra-red spectroscopy	585
LAKSHMAIAH SREERAMA and NORMAN E. SLADEK	Over-expression of glutathione S-transferases, DT-diaphorase and an apparently tumour-specific cytosolic class-3 aldehyde dehydrogenase by Warthin tumours and mucoepidermoid carcinomas of the human parotid gland	597
ROBERT E. DRUZINSKY	A method for the study of single jaw adductor muscle motor units in the rat	607
BHAVNA SHROFF, JEFFREY E. KASHNER, JENNIFER D. KEYSER, CARLA HEBERT and KATHLEEN NORRIS	Epidermal growth factor and epidermal growth factor-receptor expression in the mouse dental follicle during tooth eruption	613
<b>Short Communications</b>		
R. Z. GERMAN, A. W. CROMPTON, C. MCCCLUSKEY and A. J. THEXTON	Coordination between respiration and deglutition in a preterm infant mammal, <i>Sus scrofa</i>	619
MEIR GORSKY, MILI RAVIV, EPHRAIM KFIR and DAVID MOSKONA	Prevalence of torus palatinus in a population of young and adult Israelis	623

## NUMBER 7

D. B. FERGUSON	Change of Editor-in-Chief	iii
T. IZUMI, I. KOBAYASHI, K. OKAMURA, K. MATSUO, T. KIYOSHIMA, Y. ISHBASHI, H. INOUE and H. SAKAI	An immunohistochemical study of HLA-DR and $\alpha_1$ -antichymotrypsin-positive cells in the pulp of human non-carious and carious teeth	627
J. F. PRINZ and K. W. NG	Characterization of sounds emanating from the human temporo-mandibular joints	631
F. N. HATTAB, S. AL-KHATEEB and I. SULTAN	Mesiodistal crown diameters of permanent teeth in Jordanians	641
KWAN-YAT zee, L. P. SAMARANAYAKE, R. ATTSTRÖM and W. I. R. DAVIES	Predominant cultivable microflora of supragingival dental plaque in Chinese individuals	647
T. DiSABATO-MORDARSKI and I. KLEINBERG	Measurement and comparison of the residual saliva on various oral mucosal and dentition surfaces in humans	655
M. A. POGREL, M.-A. LOWE and R. STERN	Hyaluronan (hyaluronic acid) in human saliva	667
S. MURAI, H. SAITO, Y. MASUDA, K. NAKAMURA, S. MICHIJIRI and T. ITOH	Effects of short-term (2 weeks) streptozotocin-induced diabetes on acetylcholine and noradrenaline in the salivary glands and secretory responses to cholinergic and adrenergic sialogogues in mice	673
W. J. STEAD, R. ORCHARDSON and P. B. WARREN	A mathematical model of potassium ion diffusion in dentinal tubules	679
R. L. EVANS, M. N. PERROTT, K. R. LAU and R. M. CASE	Elevation of intracellular cAMP by noradrenaline and vasoactive intestinal peptide in striated ducts isolated from the rabbit mandibular salivary gland	689
C. A. N. RANKINE, S. L. SMITH, P. E. SCHNEIDER and D. M. GARDINER	Biochemical comparison of plaque fluid on tooth and acrylic surfaces during a sucrose challenge	695
Z. LOHINAI, I. BALLA, J. MARCZIS, Z. VASS and A. G. B. KOVÁCH	The effect of a nitric oxide donor and an inhibitor of nitric oxide synthase on blood flow and vascular resistance in feline submandibular, parotid and pancreatic glands	699

J. CARLESON, P. ALSTERGREN,  
A. APPELGREN, B. APPELGREN, S. KOPP,  
G. R. SRINIVASAN, E. THEODORSSON and  
T. LUNDEBERG

R. M. NAGLER, B. J. BAUM and  
P. C. FOX

KUANG-MIN CHANG, N. LEHRHAUPT,  
L. M. LIN, JIAN FENG,  
CHI-YING WU-WANG and  
SHOU-LIH WANG

Effects of adjuvant on neuropeptide-like immunoreactivity in experimentally induced temporomandibular arthritis in rats

705

A 2 week pair-fed study of early X-irradiation effects on rat major salivary gland function

713

Epidermal growth factor in gingival crevicular fluid and its binding capacity in inflamed and non-inflamed human gingiva

719

Instructions to Contributors

I

NUMBERS 8 & 9

D. B. FERGUSON	Our new Editor-in-Chief for North America	iii
K. WATANABE, H. KUMADA, F. YOSHIMURA and T. UMEMOTO	The induction of polyclonal B-cell activation and interleukin-1 production by the 75-kDa cell surface protein from <i>Porphyromonas gingivalis</i> in mice	725
A. ESTREICHER, A. BROGGIATO, P. DUROUX, E. ANDERSEN and G. CIMASONI	Low molecular-weight proteins in human gingival crevicular fluid	733
R. ZHOU, A. E. ZAKI and D. R. EISENMANN	Morphometry and autoradiography of altered rat enamel protein processing due to chronic exposure to fluoride	739
S. SHIMIZU, M. A. KIDO, T. KIYOSHIMA and T. TANAKA	Postnatal development of substance P-, calcitonin gene-related peptide- and neuropeptide Y-like immunoreactive nerve fibres in the synovial membrane of the rat temporomandibular joint	749
R. LANDESBERG, E. TAKEUCHI and J. E. PUZAS	Cellular, biochemical, and molecular characterization of the bovine temporomandibular joint disc	761
V. J. HORN, R. S. REDMAN and I. S. AMBUKAR	Response of rat salivary glands to mastication of pelleted vitamin A-deficient diet	769
R. K. RISINGER and W. R. PROFFIT	Continuous overnight observation of human premolar eruption	779
S. K. KIM, L. ANG, Y. Y. HSU, J. DÖRSCHER-KIM and S. KIM	Antagonistic effect of D <sup>+</sup> -myo-inositol-1,2,6-trisphosphate (PP56) on neuropeptide Y-induced vasoconstriction in the feline dental pulp	791
A. LONG, A. R. LOESCHER and P. P. ROBINSON	A histological study on the effect of different periods of orthodontic force on the innervation and dimensions of the cat periodontal ligament	799
T. DiSABATO-MORDARSKI and I. KLEINBERG	Use of a paper-strip absorption method to measure the depth and volume of saliva retained in embrasures and occlusal fossae of the human dentition	809
M. SAARELA, J. HANNULA, J. MÄTTÖ, S. ASIKAINEN and S. ALALUUUSA	Typing of mutans streptococci by arbitrarily primed polymerase chain reaction	821
R. L. MACNEIL, J. BERRY, C. STRAYHORN and M. J. SOMERMAN	Expression of bone sialoprotein mRNA by cells lining the mouse tooth root during cementogenesis	827
J. CAMPS, V. SANTIN, R. RIEU, J. FUSERI and J. C. FRANQUIN	Effects of pulsatile versus non-pulsatile pulpal pressure simulations on diffusional transport across human dentine <i>in vitro</i>	837
T. NAKANO and P. G. SCOTT	Changes in the chemical composition of the bovine temporomandibular joint disc with age	845
F. J. DOWD, H. C. MURPHY and L. LI	Metabolism of extracellular ATP by rat parotid cells	855
I. MIZOGUCHI, I. TAKAHASHI, M. NAKAMURA, Y. SASANO, S. SATO, M. KAGAYAMA and H. MITANI	An immunohistochemical study of regional differences in the distribution of type I and type II collagens in rat mandibular condylar cartilage	863

H. KIKUCHI, T. SAWADA and T. YANAGISAWA	Effects of a functional agar surface on <i>in vitro</i> dentinogenesis induced in proteolytically isolated, agar-coated dental papillae in rat mandibular incisors	871
T. SAKAI, Y. OHSAKI, M. KIDO, M. GOTO, Y. TERADA and H. SAKAI	The distribution of fibronectin and laminin in the murine periodontal membrane, indicating possible functional roles in the apical migration of the junctional epithelium	885
C. KÄRRMAN, B. BÄCKMAN, G. HOLMGREN and K. FORSMAN	Genetic heterogeneity of autosomal dominant amelogenesis imperfecta demonstrated by its exclusion from the <i>AIH2</i> region on human chromosome 4q	893
K. N. CHRISTIE, C. THOMSON, D. HOPWOOD, A. A. HARPER and G. R. OGDEN	An immunocytochemical study of the carbonic anhydrase I isoenzyme in human oral Merkel cells	901
<b>Short Communication</b> S. CHADHA and M. A. BISHOP	Effect of mechanical removal of the pulp upon the retention of odontoblasts around the pulp chamber of human third molars	905
<b>NUMBER 10</b>		
T. NISHIOKA, M. KIMURA and U. TAKAHAMA	Effects of pH and thiocyanate on hydrogen peroxide-induced evolution of molecular oxygen in human mixed saliva	911
K. GU, R. H. SMOKE and B. RUTHERFORD	Expression of genes for bone morphogenetic proteins and receptors in human dental pulp	919
S. TANASE and J. W. BAWDEN	The immunohistochemical localization of signal-transduction pathway components Jak1, Jak2, Jak3, Tyk2 and STAT-1 during early enamel and dentine formation in rat molars	925
M. BOUVIER and W. L. HYLANDER	The mechanical or metabolic function of secondary osteonal bone in the monkey <i>Macaca fascicularis</i>	941
A. KAMADA, I. TAMURA, J. OKAZAKI, F. MATSUKAWA and T. SAKAKI	Characteristics and localization of rat submandibular gland proteoglycans	951
M. TRAUTD and I. KLEINBERG	Use of <i>N</i> -phenylmethazonium methosulphate oxidation of NADH in the quantification of oxygen uptake by oral bacteria under open-system conditions	959
M. TRAUTD and I. KLEINBERG	Stoichiometry of oxygen consumption and sugar, organic acid and amino acid utilization in salivary sediment and pure cultures of oral bacteria	965
M. H. PARKAR, H. N. NEWMAN and I. OLSEN	Polymerase chain reaction analysis of oestrogen and androgen receptor expression in human gingival and periodontal tissue	979
HWAI-NAN CHANG, L. P. GARETTO, T. R. KATONA, R. H. POTTER and W. E. ROBERTS	Angiogenic induction and cell migration in an orthopaedically expanded maxillary suture in the rat	985
<b>Short Communications</b> S. W. CADDEN, H. W. VAN DER GLAS, F. LOBBEZOON and A. VAN DER BILT	The influence of attentional factors on short- and long-latency jaw reflexes in man	995
M. RYD, T. SCHENNINGS, M. FLOCK, A. HEIMDAHL and J.-I. FLOCK	<i>Streptococcus mutans</i> major adhesion surface protein, P1 (I/II), does not contribute to attachment to valvular vegetations or to the development of endocarditis in a rat model	999

## NUMBER 11

P. L. ROSALEN, S. K. PEARSON and W. H. BOWEN	Effects of copper, iron and fluoride co-crystallized with sugar on caries development and acid formation in desalivated rats	1003
L. ZOITOPoulos, S. R. BRAILSFORD, S. GELBIER, R. W. LUDFORD, S. H. MARCHANT and D. BEIGHTON	Dental caries and caries-associated micro-organisms in the saliva and plaque of 3- and 4-year-old Afro-Caribbean and Caucasian children in South London	1011

M. J. TABATA, T. MATSUMURA, J.-G. LIU, S. WAKISAKA and K. KURISU	Expression of cytokeratin 14 in ameloblast-lineage cells of the developing tooth of rat, both <i>in vivo</i> and <i>in vitro</i>	1019
S. KAMAKURA, Y. SASANO, M. NAKAMURA, O. SUZUKI, H. OHKI, M. KAGAYAMA and K. MOTEKI	Initiation of alveolar ridge augmentation in the rat mandible by subperiosteal implantation of octacalcium phosphate	1029
R. P. SCAPINO, P. B. CANHAM, H. M. FINLAY and D. K. MILLS	The behaviour of collagen fibres in stress relaxation and stress distribution in the jaw-joint disc of rabbits	1039
E. R. DUMONT	Variation in quantitative measures of enamel prisms from different species as assessed using confocal microscopy	1053
D. H. PASHLEY, W. G. MATTHEWS, Y. ZHANG and M. JOHNSON	Fluid shifts across human dentine <i>in vitro</i> in response to hydrodynamic stimuli	1065
M. GARZINO, G. RAMIERI, G. PANZICA and G. PRETI	Changes in the density of protein gene product 9.5-immunoreactive nerve fibres in human oral mucosa under implant-retained overdentures	1073
<b>Short Communications</b>		
H. YOSHIDA, T. YOSHIDA, T. IIZUKA, T. SAKAKURA and S. FUJITA	An immunohistochemical and <i>in situ</i> hybridization study of the expression of tenascin in synovial membranes from human temporomandibular joints with internal derangement	1081
H. ICHIKAWA, C. XIAO, Y.-F. HE and T. SUGIMOTO	Parvalbumin-immunoreactive nerve endings in the periodontal ligaments of rat teeth	1087
S. UEMATSU, M. MOGI and T. DEGUCHI	Increase of transforming growth factor- $\beta_1$ in gingival crevicular fluid during human orthodontic tooth movement	1091
S. C. HARLAMB and H. H. MESER	The identification of proteoglycan-associated mRNAs in human dental pulp cells	1097

Instructions to Contributors

I

## NUMBER 12

C. DOLCE, A. J. KINNIBURGH and R. DZIAK	Immediate early-gene induction in rat osteoblastic cells after mechanical deformation	1101
A. IAMAROON, U. M. WALLON, C. M. OVERALL and V. M. DIEWERT	Expression of 72-kDa gelatinase (matrix metalloproteinase-2) in the developing mouse craniofacial complex	1109
E. B. JACOBSEN and K. J. HEYERAAS	Effect of capsaicin treatment or inferior alveolar nerve resection on dentine formation and calcitonin gene-related peptide- and substance P-immunoreactive nerve fibres in rat molar pulp	1121
A. CARLÉN, J. OLSSON and P. RAMBERG	Saliva mediated adherence, aggregation and prevalence in dental plaque of <i>Streptococcus mutans</i> , <i>Streptococcus sanguis</i> and <i>Actinomyces</i> spp. in young and elderly humans	1133
J. J. MAO, P. W. MAJOR and J. W. OSBORN	Coupling electrical and mechanical outputs of human jaw muscles undertaking multidirectional bite-force tasks	1141
S. TANASE and J. W. BAWDEN	The immunohistochemical localization of stat-2, -3, -4 and -5 during early enamel and dentine formation in rat molars	1149
M. F. LYONS, S. W. CADDEN, R. H. BAXENDALE and R. YEMM	Twitch interpolation in the assessment of the maximum force-generating capacity of the jaw-closing muscles in man	1161
L. MONTHERRAT-CARRET, B. PERRAT-MABILON, E. BARBEY, R. BOULOC, G. BOIVIN, A. MICHELET and H. MAGLOIRE	Chemical and X-ray analysis of fluoride, phosphorus, and calcium in human foetal blood and hard tissues	1169
L. ELIASSON, D. BIRKHED, G. HEYDEN and N. STRÖMBERG	Studies on human minor salivary gland secretions using the Periotron® method	1179

**Short Communications**

B. TERRAPON, PH. MOJON, N. MENSI  
and G. CIMASONI

M. N. HIROSE, T. TANGE, S. IGARASHI,  
Y. HIROSE and H. NAKAGAKI

Salivary albumin of edentulous patients

1183

*In vivo* fluoride profiles at different sites of buccal and lingual enamel surfaces obtained by enamel biopsy of human maxillary first permanent molars in young adults

Instructions to Contributors

I